TIFFANY & BOSCO
P.A.
THIRD FLOOR CAMELBACK ESPLANADE II
2525 EAST CAMELBACK ROAD
PHOENIX, ARIZONA 85016-9240
TELEPHONE: (602) 255-6000
FACSIMILE: (602) 255-0103
general@tblaw.com
www.tblaw.com

0000049014

BETH A. HEATH
ATTORNEY AT LAW
DIRECT LINE: (602) 255-6084
bah@tblaw.com

April 11, 2006

VIA MESSENGER

Ms. Blessing Chuckwu
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007-2927

RE: Green Acres Water, L.L.C. – Application for Certificate of Convenience and Necessity Docket No. W-20430A-05-0839
Green Acres Sewer, L.L.C. – Application for Certificate of Convenience and Necessity Docket No. SW-20431A-05-0840

Dear Ms. Chuckwu:

The above applications included property in the requested service area for which the applicant has been unable to obtain Requests for Service from the property owners. As a result, we are hereby amending the above applications as follows so the applications include only property for which Requests for Service have been obtained.

1. The legal description of the service area for both applications is revised per the attached Exhibit "A2".

2. Exhibit "B" in the above applications is replaced with the attached Exhibit "B2";

3. The Green Acres Sewer Conceptual Sewer System Study, included with the Green Acres Sewer, L.L.C. application has been amended as a result of the revised legal description. A copy of the revised Green Acres Sewer Conceptual Sewer System Study is enclosed.

4. The Green Acres Water Conceptual Water System Study, included with the Green Acres Water, L.L.C. application has been amended as a result of the revised legal description. A copy of the revised Green Acres Water Conceptual Water System Study is enclosed.

302540/7827-037

Please contact me if you have any questions.

Sincerely,

TIFFANY & BOSCO, P.A.

Beth A. Heath

BAH/
Enclosures

cc. Mark Dioguardi w/o Enclosures
Jacob Hansen w/ Enclosures
Duane Hunn w/o Enclosures
Steve Robson w/o Enclosures

PARCEL 1
THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

EXCEPT ALL THAT PORTION OF LOT 10 LYING SOUTHWESTERLY OF OLD HIGHWAY 80 RIGHT-OF-WAY FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT THE CENTER SECTION OF SAID SECTION 6;

THENCE SOUTH ALONG THE NORTH-SOUTH MID-SECTION LINE, A DISTANCE OF 1575.09 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY OF OLD U.S. HIGHWAY 80. THENCE SOUTHEAST ALONG THE ARC OF A CURVE CONCAVE NORTHEAST AND SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF SAID CURVE HAVING A RADIUS OF 1095.91 FEET, 105.92 FEET THROUGH 05 DEGREES 32 MINUTES 15 SECONDS OF CENTRAL ANGLE TO A POINT OF TANGENCY. THENCE SOUTH 44 DEGREES 55 MINUTES 02 SECONDS EAST 868.00 FEET TO A POINT OF CURVE CONCAVE SOUTHWEST HAVING A RADIUS OF 4543.379 FEET. THENCE SOUTHEAST ALONG THE NORTHEASTERLY RIGHT-OF-WAY AND THE ARC OF SAID CURVE 500.56 FEET THROUGH 06 DEGREES 18 MINUTES 45 SECONDS OF CENTRAL ANGLE TO A POINT OF REVERSE CURVE CONCAVE NORTHEAST HAVING A RADIUS OF 4344.523 FEET. THENCE ALONG THE ARC OF SAID REVERSE CURVE 148.75 FEET THROUGH 01 DEGREES 57 MINUTES 42 SECONDS OF CENTRAL ANGLE TO A POINT ON THE SOUTH LINE OF SAID SOUTH EAST QUARTER AND THE SOUTH LINE OF SAID SECTION 6, NORTH 87 DEGREES 39 MINUTES 14 SECONDS WEST 1562.44 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 6.

PARCEL 2
THE WEST HALF OF SECTION 6 TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;

EXCEPT THAT PORTION OF LAND LYING SOUTH OF THE FOLLOWING DESCRIBED RIGHT OF WAY LINE:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 6;

THENCE NORTH 89°51'11" EAST, ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 6, A DISTANCE OF 468.19 FEET TO THE EXISTING RIGHT OF WAY OF OLD HIGHWAY 80, SAID POINT BEING ON THE ARC OF A 2905.53 FOOT RADIUS NON TANGENT CURVE, CONCAVE SOUTHWESTERLY WHOSE CENTER BEARS SOUTH 40°20'38" WEST AND THE POINT OF BEGINNING;

THENCE SOUTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 22°16'12", A DISTANCE OF 1129.33 FEET.

THENCE SOUTH 22°51'48" EAST, A DISTANCE OF 3406.15 FEET TO THE BEGINNING OF A TANGENT CURVE OF 1107.90 FOOT RADIUS, CONCAVE NORTHEASTERLY;

THENCE SOUTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°59'07", A DISTANCE OF 309.10 FEET TO A POINT OF ENDING ON THE NORTH-SOUTH MID- SECTION LINE OF SAID SECTION 6 WHICH BEARS SOUTH 00°18'41" WEST, A DISTANCE OF 1135.40 FEET TO THE SOUTH QUARTER CORNER OF SAID SECTION 6.

PARCEL 3
THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 1; AND

THE NORTHEAST QUARTER OF SECTION 1;

AND THE SOUTHEAST QUARTER OF SECTION 1;

EXCEPT THE SOUTH HALF OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 1 BEING 5 AC IN SIZE;

ALL IN TOWNSHIP 3 SOUTH RANGE 5 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 4

ALL OF THE NORTHWEST QUARTER AND OF THE NORTH HALF OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, LYING WEST OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT A BENT BUREAU OF LAND MANAGEMENT (BLM) BRASS CAP, MARKING THE SOUTH QUARTER CORNER OF SAID SECTION 26, BEING SOUTH 89°22'13" EAST 2635.47 FEET FROM A BRASS CAP MARKED "LS 22282" MARKING THE SOUTHWEST CORNER OF SAID SECTION 26;

THENCE ALONG THE SOUTH LINE OF SAID SECTION 26, NORTH 89°22'13" WEST 760.58 FEET TO THE EXISTING RIGHT OF WAY CENTERLINE OF STATE ROUTE 85;

THENCE ALONG SAID EXISTING RIGHT OF WAY CENTERLINE OF STATE ROUTE 85, NORTH 10°04'29"EAST 180.86 FEET;

THENCE NORTH 79°55'31" WEST 210.80 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 10°04'06" EAST 2462.87 FEET TO THE EAST-WEST MID SECTION LINE OF SAID SECTION 26, BEING SOUTH 89°20'59" EAST 2111.14 FEET FROM A BLM BRASS CAP MARKING THE WEST QUARTER CORNER OF SAID SECTION 26;

THENCE CONTINUING NORTH 10°04'06" EAST 407.64 FEET;

THENCE NORTH 04°21'49" EAST 1082.88 FEET TO THE BEGINNING OF A TANGENT CURVE OF 12377.67 FOOT RADIUS, CONCAVE EASTERLY;

THENCE NORTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 04°55'56", A DISTANCE OF 1065.49 FEET;

THENCE NORTH 79°55'54" WEST 626.48 FEET; TO THE POINT OF ENDING ON THE NORTH LINE OF SECTION 26, BEING NORTH 89°23'58" WEST 887.25 FEET FROM A BLM BRASS CAP MARKING THE NORTH QUARTER CORNER OF SAID SECTION 26.

PARCEL 5
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA LYING NORTHERLY OF A LINE DESCRIBED AS BEGINNING AT THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 33 AND TERMINATING AT THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 33.

PARCEL 6
THAT PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32 AND THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 33, ALL IN TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA LYING NORTHERLY OF A LINE DESCRIBED AS BEGINNING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 32 AND TERMINATING AT THE NORTHEAST CORNER OF SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 33.

PARCEL 7
THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 8
THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 9
THE NORTH HALF OF THE NORTHWEST QUARTER AND THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 10
THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 11
THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 12
THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 13
THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 14
THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 15
THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28;

AND THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 29;

AND THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 32;

AND THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 32;

AND THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 32;

AND THE EAST HALF OF THE NORTHEAST QUARTER OF SECTION 31;

AND THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 29;

ALL IN TOWNSHIP 2 SOUTH RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 16
THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER; AND

THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER;

ALL IN SECTION 33, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 17
THE NORTH HALF OF THE SOUTHEAST QUARTER; AND

THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER; AND

THE SOUTH HALF OF THE NORTHEAST QUARTER; AND

THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER;

ALL IN SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 18
THE SOUTHWEST QUARTER OF SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 19
THE SOUTH HALF OF SECTION 31, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 20
THE NORTHEAST QUARTER OF SECTION 6, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 21
THE NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 22
THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PARCEL 23
THE WEST HALF AND THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 2 SOUTH, RANGE 5 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

EXCEPT THAT PORTION LYING NORTH OF THE EXISTING SOUTH RIGHT OF WAY OF OLD HIGHWAY 80 DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 36;

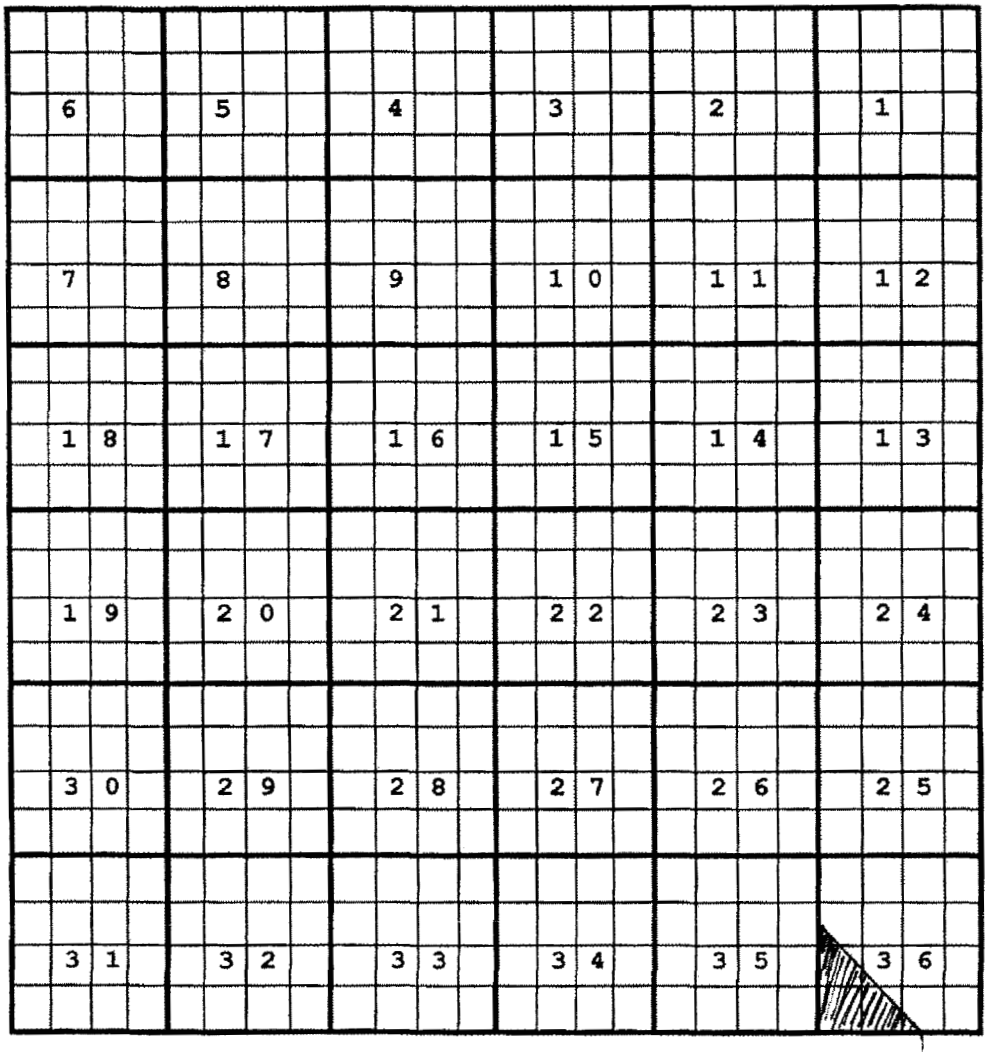
THENCE NORTH 00°12'00" WEST, A DISTANCE OF 107.49 FEET TO THE SOUTH RIGHT OF WAY LINE OF OLD HIGHWAY 80 AND THE POINT OF BEGINNING;

THENCE SOUTH 48°23'51" EAST, ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 4190.15 FEET TO THE BEGINNING OF A TANGENT CURVE OF A 2805.53 FOOT RADIUS, CONCAVE SOUTHWESTERLY;

THENCE NORTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 00°36'24", A DISTANCE OF 29.71 FEET TO THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36 AND TO THE POINT OF ENDING FROM WHICH THE SOUTHEAST CORNER BEARS NORTH 87°09'55" EAST A DISTANCE OF 2124.23 FEET

ATTACHMENT "B"

Maricopa	36	25	5 W
COUNTY	SECTION	TOWNSHIP	RANGE



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Attached

THE WEST HALF AND THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 2 SOUTH, RANGE 5 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

EXCEPT THAT PORTION LYING NORTH OF THE EXISTING SOUTH RIGHT OF WAY OF OLD HIGHWAY 80 DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 36;

THENCE NORTH 00°12'00" WEST, A DISTANCE OF 107.49 FEET TO THE SOUTH RIGHT OF WAY LINE OF OLD HIGHWAY 80 AND THE POINT OF BEGINNING;

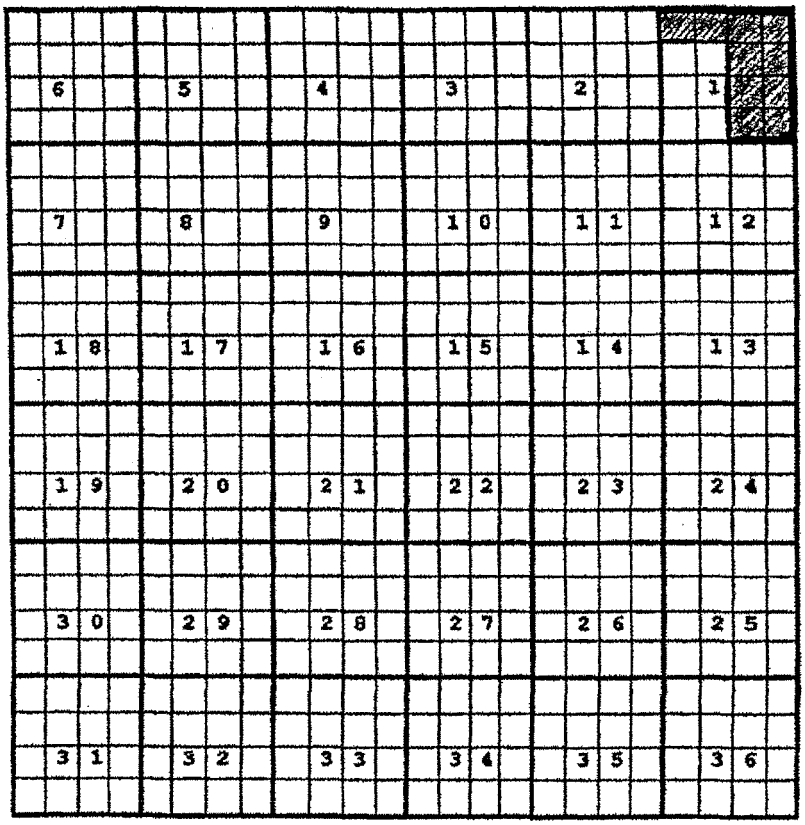
THENCE SOUTH 48°23'51" EAST, ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 4190.15 FEET TO THE BEGINNING OF A TANGENT CURVE OF A 2805.53 FOOT RADIUS, CONCAVE SOUTHWESTERLY;

THENCE NORTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 00°36'24", A DISTANCE OF 29.71 FEET TO THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36 AND TO THE POINT OF ENDING FROM WHICH THE SOUTHEAST CORNER BEARS NORTH 87°09'55" EAST A DISTANCE OF 2124.23 FEET

CS-5

ATTACHMENT "B"

MARICOPA	1	3S	5W
COUNTY	SECTION	TOWNSHIP	RANGE

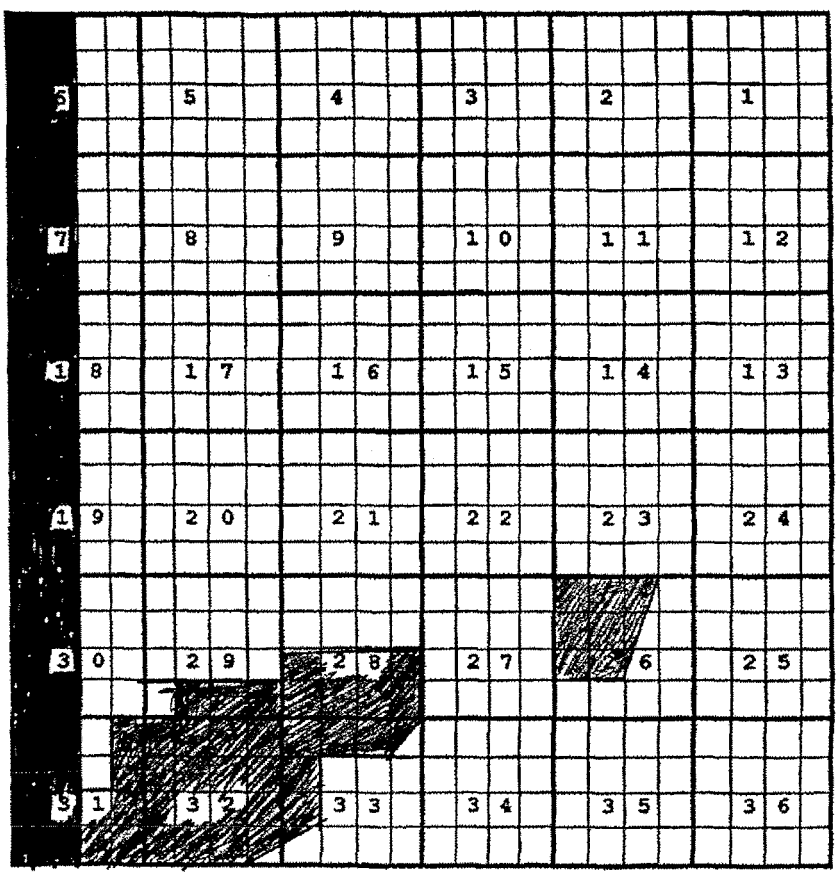


Type or Print Description Here:

THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 1; AND
THE NORTHEAST QUARTER OF SECTION 1; AND
THE SOUTHEAST QUARTER OF SECTION 1;
EXCEPT THE SOUTH HALF OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 1 BEING 5 ACRES, IN SIZE;
ALL IN TOWNSHIP 3 SOUTH RANGE 5 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

ATTACHMENT "B"

MARICOPA	28,29,31,32,33,36	2S	4W
COUNTY	SECTION	TOWNSHIP	RANGE



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ATTACHED

ALL OF THE NORTHWEST QUARTER AND OF THE NORTH HALF OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, LYING WEST OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT A BENT BUREAU OF LAND MANAGEMENT (BLM) BRASS CAP, MARKING THE SOUTH QUARTER CORNER OF SAID SECTION 26, BEING SOUTH 89°22'13" EAST 2635.47 FEET FROM A BRASS CAP MARKED "LS 22282" MARKING THE SOUTHWEST CORNER OF SAID SECTION 26;

THENCE ALONG THE SOUTH LINE OF SAID SECTION 26, NORTH 89°22'13" WEST 760.58 FEET TO THE EXISTING RIGHT OF WAY CENTERLINE OF STATE ROUTE 85;

THENCE ALONG SAID EXISTING RIGHT OF WAY CENTERLINE OF STATE ROUTE 85, NORTH 10°04'29"EAST 180.86 FEET;

THENCE NORTH 79°55'31" WEST 210.80 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 10°04'06" EAST 2462.87 FEET TO THE EAST-WEST MID SECTION LINE OF SAID SECTION 26, BEING SOUTH 89°20'59" EAST 2111.14 FEET FROM A BLM BRASS CAP MARKING THE WEST QUARTER CORNER OF SAID SECTION 26;

THENCE CONTINUING NORTH 10°04'06" EAST 407.64 FEET;

THENCE NORTH 04°21'49" EAST 1082.88 FEET TO THE BEGINNING OF A TANGENT CURVE OF 12377.67 FOOT RADIUS, CONCAVE EASTERLY;

THENCE NORTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 04°55'56", A DISTANCE OF 1065.49 FEET;

THENCE NORTH 79°55'54" WEST 626.48 FEET; TO THE POINT OF ENDING ON THE NORTH LINE OF SECTION 26, BEING NORTH 89°23'58" WEST 887.25 FEET FROM A BLM BRASS CAP MARKING THE NORTH QUARTER CORNER OF SAID SECTION 26.

THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE NORTH HALF OF THE NORTHWEST QUARTER AND THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA LYING NORTHERLY OF A LINE DESCRIBED AS BEGINNING AT THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 33 AND TERMINATING AT THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 33.

THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28;

AND THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 29;

AND THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 32;

AND THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 32;

AND THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 32;

AND THE EAST HALF OF THE NORTHEAST QUARTER OF SECTION 31;

AND THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 29;

ALL IN TOWNSHIP 2 SOUTH RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER; AND

THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER;

ALL IN SECTION 33, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE NORTH HALF OF THE SOUTHEAST QUARTER; AND

THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER; AND

THE SOUTH HALF OF THE NORTHEAST QUARTER; AND

THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER;

ALL IN SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

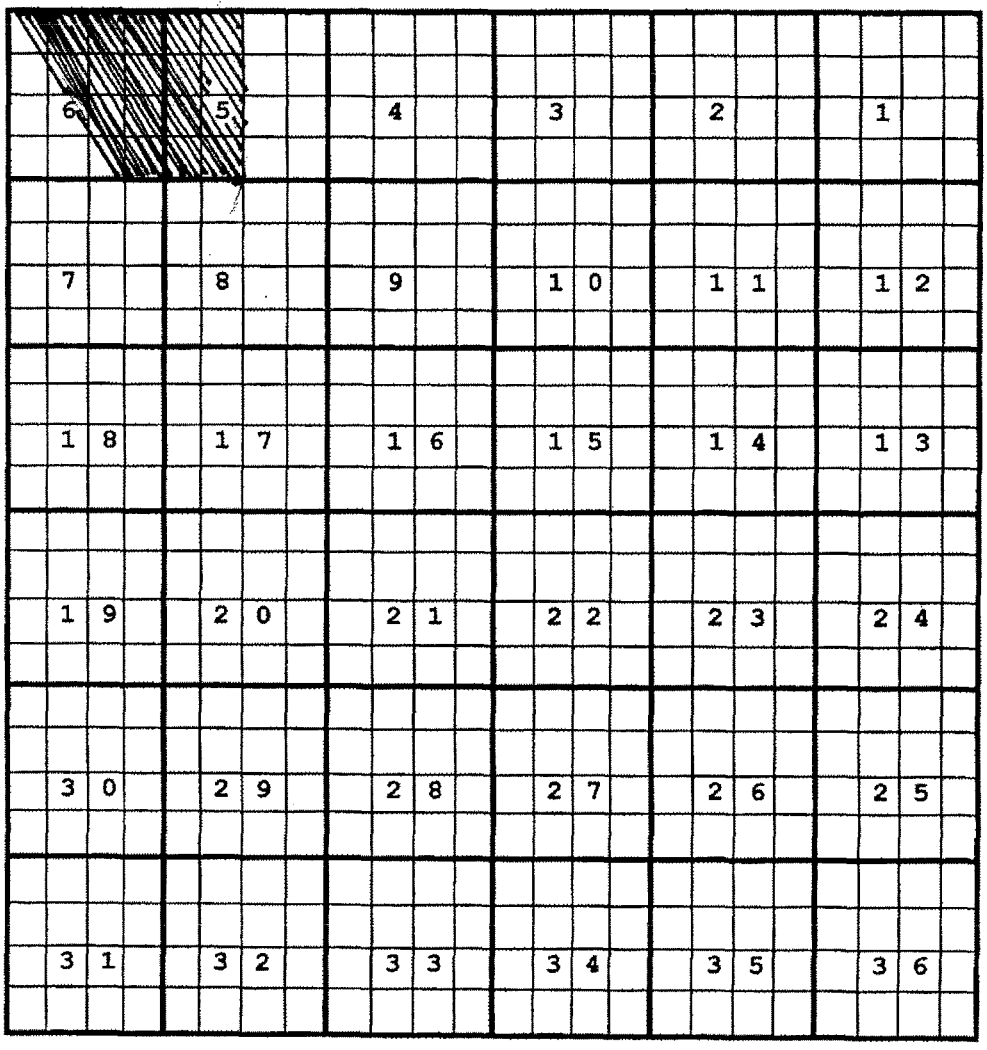
THE SOUTHWEST QUARTER OF SECTION 32, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE SOUTH HALF OF SECTION 31, TOWNSHIP 2 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THAT PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32 AND THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 33, ALL IN TOWNSHIP 2 SOUTH, RANGE 4 WEST, GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA LYING NORTHERLY OF A LINE DESCRIBED AS BEGINNING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 32 AND TERMINATING AT THE NORTHEAST CORNER OF SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 33.

ATTACHMENT "B"

Maricopa	5,6	35	4W
COUNTY	SECTION	TOWNSHIP	RANGE



Type or Print Description Here:

Attached

THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

EXCEPT ALL THAT PORTION OF LOT 10 LYING SOUTHWESTERLY OF OLD HIGHWAY 80 RIGHT-OF-WAY FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT THE CENTER SECTION OF SAID SECTION 6;

THENCE SOUTH ALONG THE NORTH-SOUTH MID-SECTION LINE, A DISTANCE OF 1575.09 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY OF OLD U.S. HIGHWAY 80. THENCE SOUTHEAST ALONG THE ARC OF A CURVE CONCAVE NORTHEAST AND SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF SAID CURVE HAVING A RADIUS OF 1095.91 FEET, 105.92 FEET THROUGH 05 DEGREES 32 MINUTES 15 SECONDS OF CENTRAL ANGLE TO A POINT OF TANGENCY. THENCE SOUTH 44 DEGREES 55 MINUTES 02 SECONDS EAST 868.00 FEET TO A POINT OF CURVE CONCAVE SOUTHWEST HAVING A RADIUS OF 4543.379 FEET. THENCE SOUTHEAST ALONG THE NORTHEASTERLY RIGHT-OF-WAY AND THE ARC OF SAID CURVE 500.56 FEET THROUGH 06 DEGREES 18 MINUTES 45 SECONDS OF CENTRAL ANGLE TO A POINT OF REVERSE CURVE CONCAVE NORTHEAST HAVING A RADIUS OF 4344.523 FEET. THENCE ALONG THE ARC OF SAID REVERSE CURVE 148.75 FEET THROUGH 01 DEGREES 57 MINUTES 42 SECONDS OF CENTRAL ANGLE TO A POINT ON THE SOUTH LINE OF SAID SOUTH EAST QUARTER AND THE SOUTH LINE OF SAID SECTION 6, NORTH 87 DEGREES 39 MINUTES 14 SECONDS WEST 1562.44 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 6.

THE NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

THE WEST HALF OF SECTION 6 TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;

EXCEPT THAT PORTION OF LAND LYING SOUTH OF THE FOLLOWING DESCRIBED RIGHT OF WAY LINE:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 6;

THENCE NORTH 89°51'11" EAST, ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 6, A DISTANCE OF 468.19 FEET TO THE EXISTING RIGHT OF WAY OF OLD HIGHWAY 80, SAID POINT BEING ON THE ARC OF A 2905.53 FOOT RADIUS NON TANGENT CURVE, CONCAVE SOUTHWESTERLY WHOSE CENTER BEARS SOUTH 40°20'38" WEST AND THE POINT OF BEGINNING;

THENCE SOUTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 22°16'12", A DISTANCE OF 1129.33 FEET.

THENCE SOUTH 22°51'48" EAST, A DISTANCE OF 3406.15 FEET TO THE BEGINNING OF A TANGENT CURVE OF 1107.90 FOOT RADIUS, CONCAVE NORTHEASTERLY;

THENCE SOUTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°59'07", A DISTANCE OF 309.10 FEET TO A POINT OF ENDING ON THE NORTH-SOUTH MID- SECTION LINE OF SAID SECTION 6 WHICH BEARS SOUTH 00°18'41" WEST, A DISTANCE OF 1135.40 FEET TO THE SOUTH QUARTER CORNER OF SAID SECTION 6.

THE NORTHEAST QUARTER OF SECTION 6, TOWNSHIP 3 SOUTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

GREEN ACRES SEWER

CONCEPTUAL SEWER SYSTEM STUDY

Prepared For:

Green Acres Sewer, L.L.C.
2151 East Broadway Road, Suite 210
Tempe, AZ 85282

Prepared By:

Carter Burgess
101 North 1st Avenue, Suite 3100
Phoenix, AZ 85003
(602) 253-1200

Project Number: 195047.011

April 6, 2006

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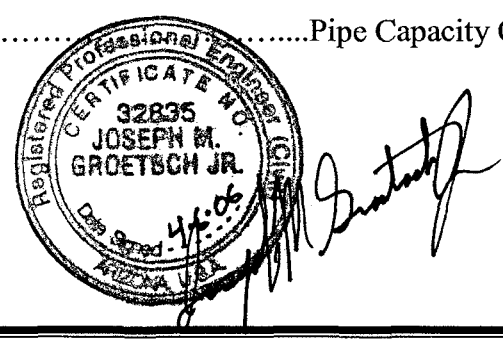
EXHIBITS

APPENDIX



1. INTRODUCTION

1.1. General Background

The Green Acres Sewer Utility Franchise Area (GASUFA) consists of approximately 3,300-acres located in unincorporated Maricopa County. It is located between the Town of Buckeye and the Town of Gila Bend, along Highway 85. It is bounded by Highway 85 on the East, the Gila River on the west, and Patterson Road on the south, and the Buckeye Hills on the north. The majority of the land is currently being used for agricultural, but part is undisturbed desert. Rainbow Wash runs diagonally through the franchise area from northeast to southwest. The peak discharge in the wash is 11,568 cubic feet per second. (cfs). Refer to **Exhibit 1** – Vicinity Map, for the project location. **Exhibit 2** – Franchise Area, shows the proposed boundaries of the Franchise area, as well as the current owners of each parcel.

1.2. Scope of the Study

The purpose of this study is to develop a general sewer infrastructure concept for the GASUFA. This study is not intended to be a detailed design report; rather, it is a general discussion of the improvements that will be required. The proposed infrastructure has been conceptually designed in accordance with Maricopa County Environmental Services Department (MCESD) and Arizona Administrative Code (AAC). **Exhibit 3** – Preliminary Conceptual Wastewater Schematic, shows the preliminary conceptual schematic for several of the major trunk sewer lines. Due to the size of the franchise area development will be an ongoing process. The proposed trunk lines shown in **Exhibit 3** – Preliminary Conceptual Wastewater Schematic, are sized for the ultimate build-out of the franchise area.

The study was conducted for the proposed sewer infrastructure system at the anticipated 5 year build out and at full build-out. While it is expected that the actual construction of the system will be phased, the sewer demands and

conceptual design have been estimated for development of the system at the 5 year build out and at full build-out.

1.3. Topographic Conditions

The area encompassed by the GASUFA generally slopes from northeast to southwest. Elevations range from approximately 900 feet at the northeast corner to approximately 720 feet at the southwest corner. Slopes range from 1.5 percent in the areas at the base of the Buckeye Hills to 0.5 percent in the areas toward the southwest corner of the site.

1.4. Existing Wastewater Infrastructure

Currently there is no existing wastewater infrastructure located in the Utility District boundaries.

2. SEWER FLOWS

At the 5-year build-out we are estimating that the GASUFA will serve approximately 5,000 single-family residential units. **Exhibit 4** - Estimated 5-year development area, shows the area that is currently anticipated to be developed in the first five (5) years.

2.1. Residential Development

At full built out, based on an estimated density of 3.25 DU/ac, it is anticipated that 10,725 residential units will be constructed. Residential demand criteria are in conformance with MCESD design requirements. The demand calculations are as follows:

$$\text{Average Day Demand (gpd)} = \left(\frac{\text{Average Population}}{\text{Unit}}\right) \times (\text{Average Daily Sewer Flow per Unit})$$

$$\text{Peak Hour Demand (gpm)} = (\text{Average Day Demand}) \times (\text{Peak Hour Demand Peaking Factor})/1440$$

For the purpose of sizing the proposed wastewater collection system, it was assumed that 3.25 persons would occupy each dwelling unit, and that each person would generate an average of 100 gallons of wastewater per day. The calculated average flow was multiplied by a peaking factor to obtain the peak flow. The peaking factors are determined in accordance with the Arizona Administrative Code R18-9-E301. **Table 1** shows the peaking factors used in this study.

Table 1 – Peaking Factors

Upstream Population	Peaking Factor
<100	4.00
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.50
800	2.46
900	2.42
1000	2.38
1001 to 10,000	$PF = (6.330 \times \text{population}^{-0.231}) + 1.094$
10,001 to 100,000	$PF = (6.177 \times \text{population}^{-0.233}) + 1.128$

2.2. Projected Wastewater Flows

Projected average daily sewer flows (ADF) calculated for the Utility Franchise Area serve as the basis for determination of required sewer main diameters and the Wastewaster Treatment Plant (WWTP) capacity. **Exhibit 3** - Preliminary Conceptual Wastewater Schematic, shows the schematic location and calculated diameters of the trunk lines. **Appendix I** contains a table showing the information used to determine the pipe size of the trunk lines shown on **Exhibit 3** - Preliminary Conceptual Wastewater Schematic.

MCESD requires new plants to be permitted at 300 gallons per dwelling unit (gpdu). When the first measurable flows occur and the generation rate specific to the Franchise Area can be determined, the WWTP will be re-permitted to reflect the measured flow per dwelling unit (DU). For the purposes of this study 250 gpdu will be used to determine flows for the first 5-years. For the ultimate build out, a flow rate of 200 gpdu will be used.

Following are the projected flows for 5 year build out and ultimate build out:

- 5 Year Build Out
  - 5,000 residential units
  - 250 gpd/unit
  - 1.25 million gallons per day (MGD) Average Day Flow
  - Peaking Factor 1.77
  - 1,921 gpm Peak Flow
- Ultimate Build Out
  - 10,725 residential units
  - 200 gpd/unit
  - 2.15 MGD Average Day Flow
  - Peaking Factor 1.67
  - 2,488 gpm Peak Flow

3. PROPOSED SEWER SYSTEM

3.1. Utility Franchise Area System

The sewer infrastructure proposed for the GASUFA includes gravity sewer mains, lift station, force main, and a WWTP. The sewer infrastructure at the 5-year build will collect and treat an average daily flow of 1.25 MGD capacity. The design will be able to accommodate the low flows associated with the project start-up. The sewer infrastructure system for the GASUFA will ultimately collect and treat an average daily flow of 2.15 MGD.

3.2. Gravity Mains

The gravity sewer mains sizes have been determined based on the projected sewer flows from each development area. Gravity sewer mains are designed to provide full flow velocities of not less than 2.0 fps per Arizona Administrative Code R18-9-E301 (G), and velocities not to exceed 9.0 fps under peak flow conditions. The gravity sewer mains will be designed to convey the peak flows (partial pipe flows) at no more than 75 percent of the pipe capacity. The minimum pipe slopes that will be used are shown in Table 2. The pipe materials for all pipe sizes will be PVC, however the force main will be ductile iron. Heavier wall widths will be used for depths greater than 15 ft. The main backbone lines of the sewer infrastructure will be installed by the utility company. Each developer will utilize these main lines and install local collection lines to service the homes in their respective developments. Refer to **Exhibit 3** – Preliminary Conceptual Sewer Schematic, for the location of the proposed trunk lines.

Table 2 Minimum Pipe Slope and Maximum Capacity

Diameter (in.)	Absolute Minimum Slope (ft./ft.)	Full Capacity (gpm)	75% Full Capacity (gpm)	75% Full Capacity (gpd)
8	0.004	344	258	371,520
10	0.0025	493	370	532,800
12	0.002	717	538	774,720
15	0.0015	1126	845	1,216,800
18	0.0011	1568	1176	1,693,440
24	0.0007	2694	2021	2,910,240
30	0.0006	4522	3392	4,884,480

3.3. Phasing

The WWTP will be built in two (2) phases. The first phase will be built to treat the sewage for the first two years of development. This is projected as being 1,400 homes. The second phase will be brought on-line at the end of the second year with the capacity to support the treatment for 5,000 homes, which is the projected five year build out. A package plat will provide wastewater treatment for the homes constructed in the first phase of development. When the second phase is brought on-line the former package plant will be used as a clarifier in the second phase's system. Exhibits 5, and 6 show a schematic layout of the treatment plant at the 5-year point and at full build out.

4. CONCLUSIONS

- A detailed Master Plan Design Report will be required for the proposed WWTP and collection system. The Report will address phasing of the WWTP and collection system. The Design Report will be submitted to MCESD for review and approval.

- Construction Plans will be prepared for the proposed sewer infrastructure system components including collection mains. The Construction Plans will be submitted to MCESD for review and approval.

- Detailed Design Reports will be prepared for each residential subdivision development or for groups of concurrently developed parcels within the franchise area. The Reports will provide analysis of the wastewater collection system within each developed parcel and will be submitted to MCESD for review and approval.

- Subdivision sewer system Construction Plans will be prepared for each residential parcel or for groups of concurrently developed parcels and will be submitted to MCESD for review and approval.

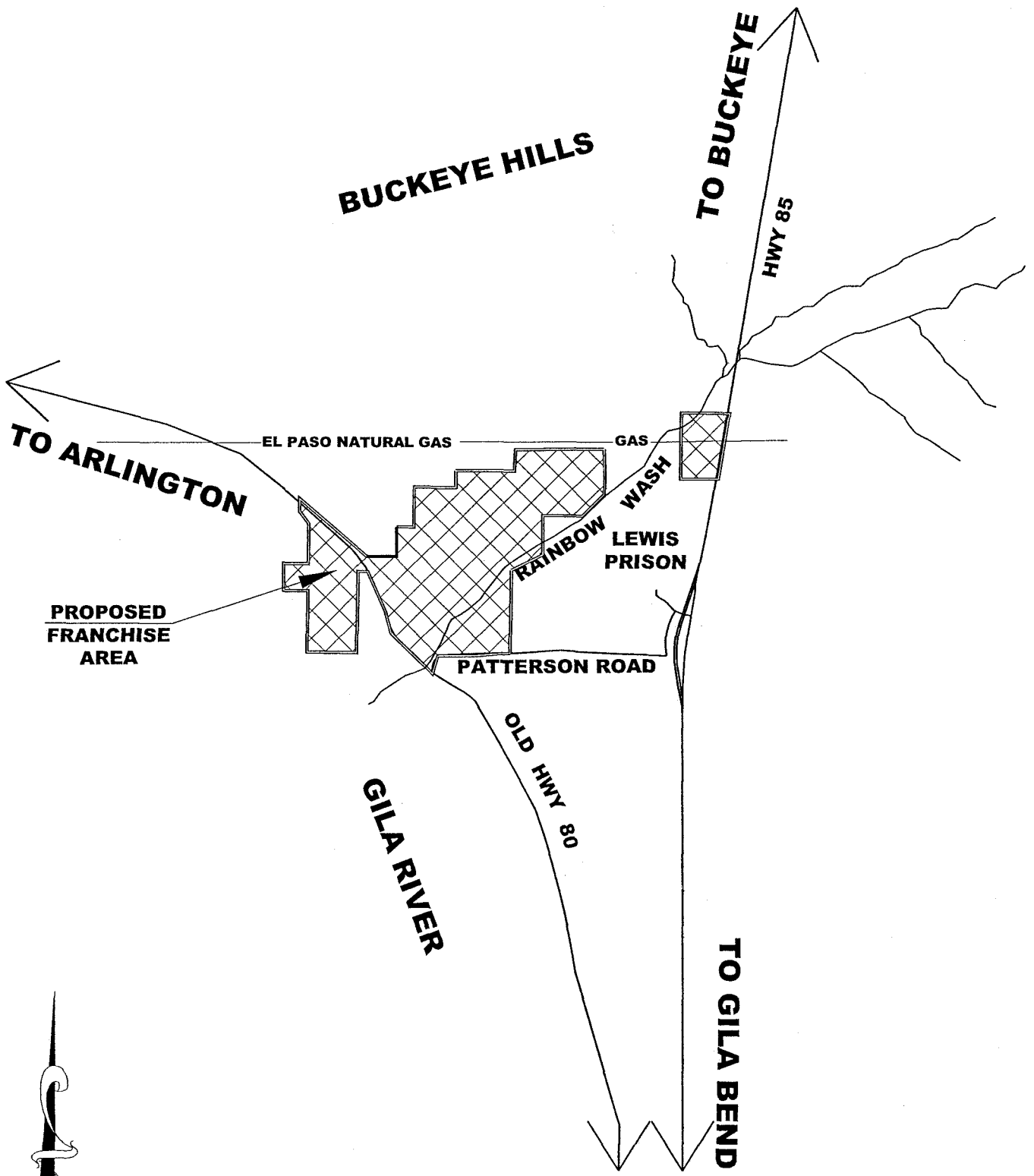
5. REFERENCES

Arizona Administrative Code: Title 18 Environmental Quality - Chapter 9 Water Pollution Control

Engineering Bulletin No. 11: Minimum Requirements for Design, Submission of Plans and Specifications of Sewage Works; Arizona Department of Environmental Quality; dated July 1978

EXHIBITS

EXHIBIT 1 – VICINITY MAP



N.T.S.

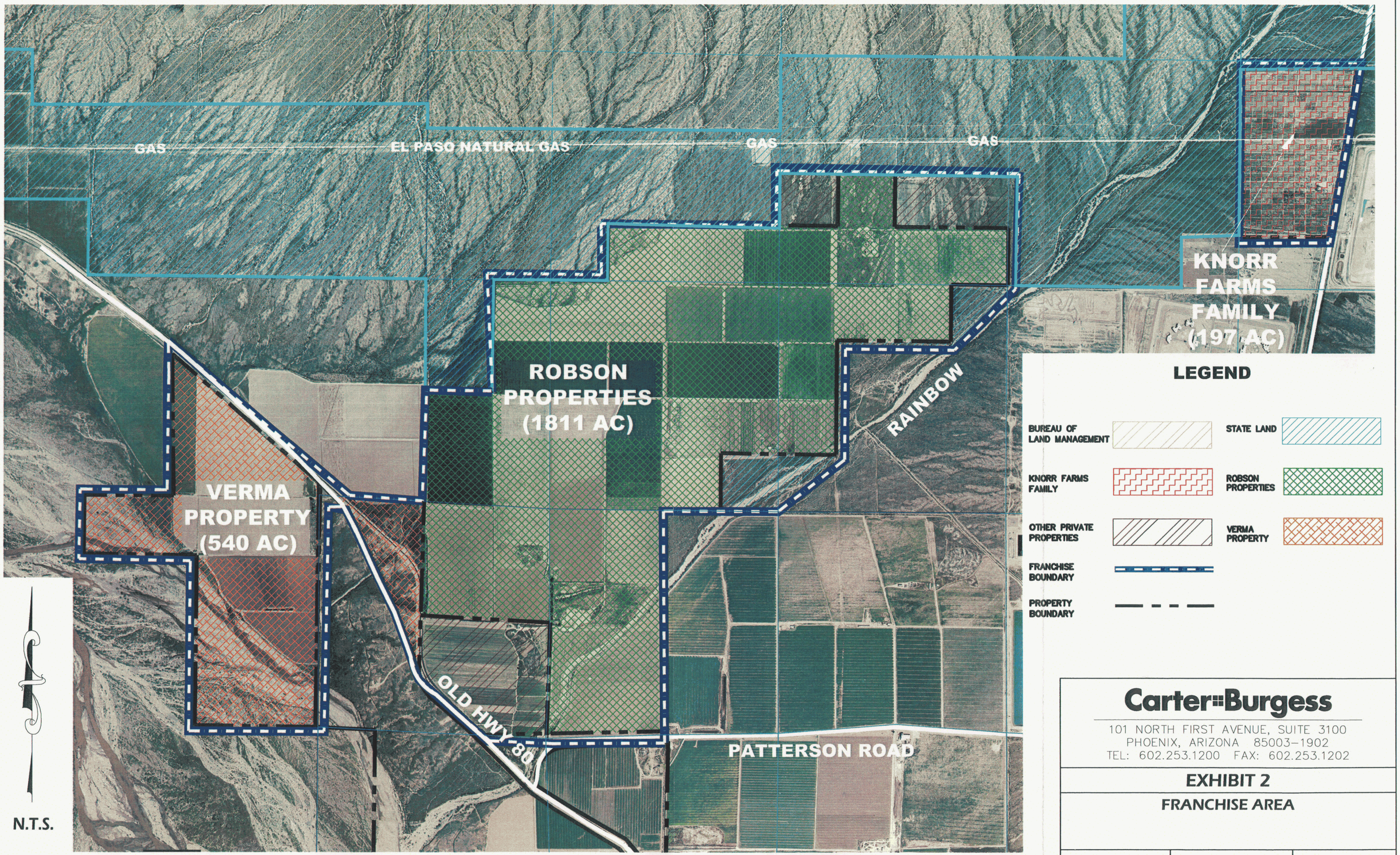
EXHIBIT 1
VICINITY MAP

JOB NUMBER
195047.011

DATE: 4.5.06
SHEET 1 OF 6

Carter::Burgess
101 N. FIRST AVE., #3100
PHOENIX, AZ 85003
TEL: 602.253.1200
FAX: 602.253.1202

EXHIBIT 2 – FRANCHISE AREA



LEGEND

- BUREAU OF LAND MANAGEMENT
- STATE LAND
- KNORR FARMS FAMILY
- ROBSON PROPERTIES
- OTHER PRIVATE PROPERTIES
- VERMA PROPERTY
- FRANCHISE BOUNDARY
- PROPERTY BOUNDARY

N.T.S.

Carter::Burgess
101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 2

FRANCHISE AREA

Date:	4.5.06	JOB NO:	195047	SHEET 2 OF 6

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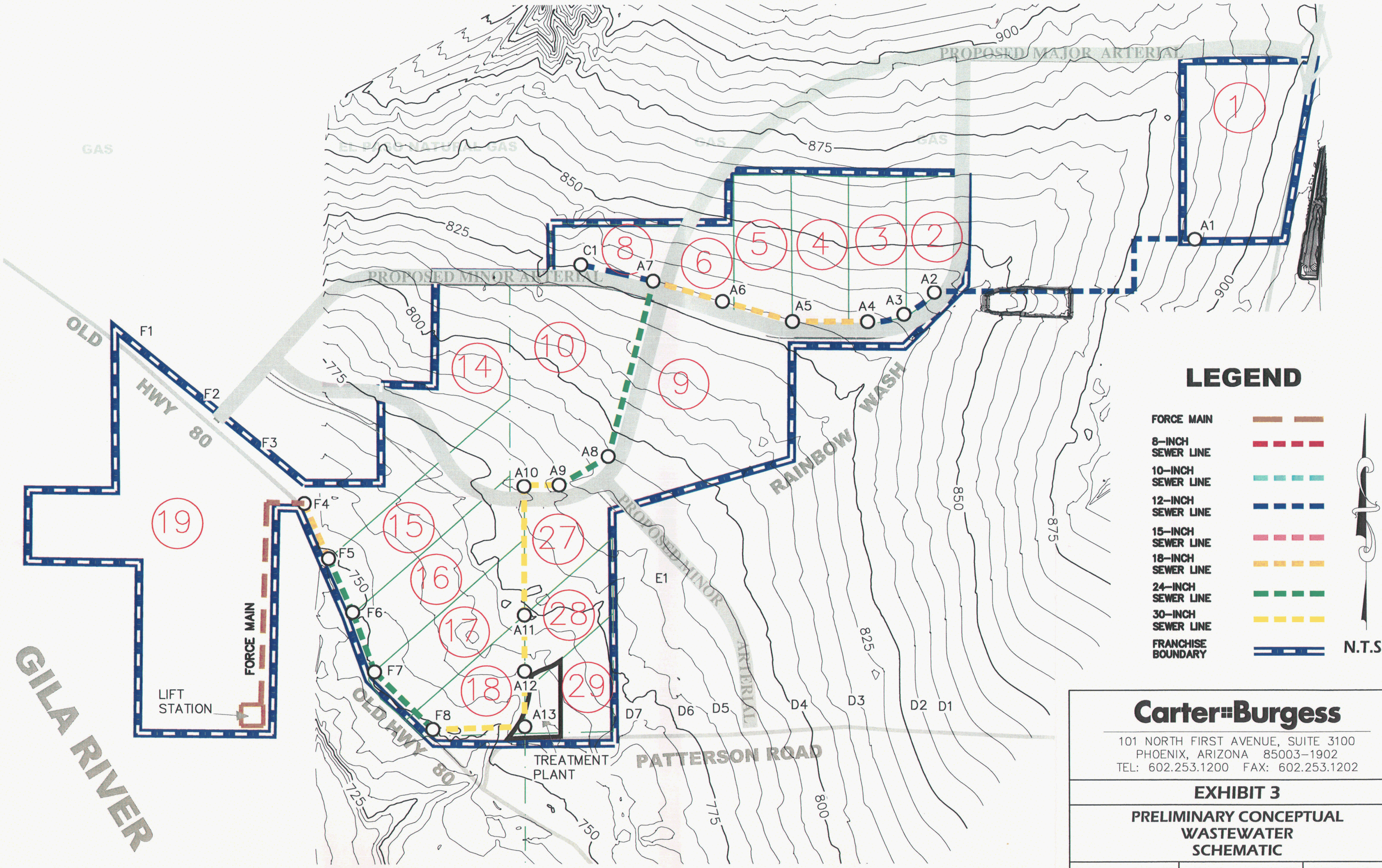
EXHIBIT 3

PRELIMINARY CONCEPTUAL WASTEWATER SCHEMATIC



LEGEND

- FORCE MAIN
- 8-INCH SEWER LINE
- 10-INCH SEWER LINE
- 12-INCH SEWER LINE
- 15-INCH SEWER LINE
- 18-INCH SEWER LINE
- 24-INCH SEWER LINE
- 30-INCH SEWER LINE
- FRANCHISE BOUNDARY

N.T.S.

Carter::Burgess

101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

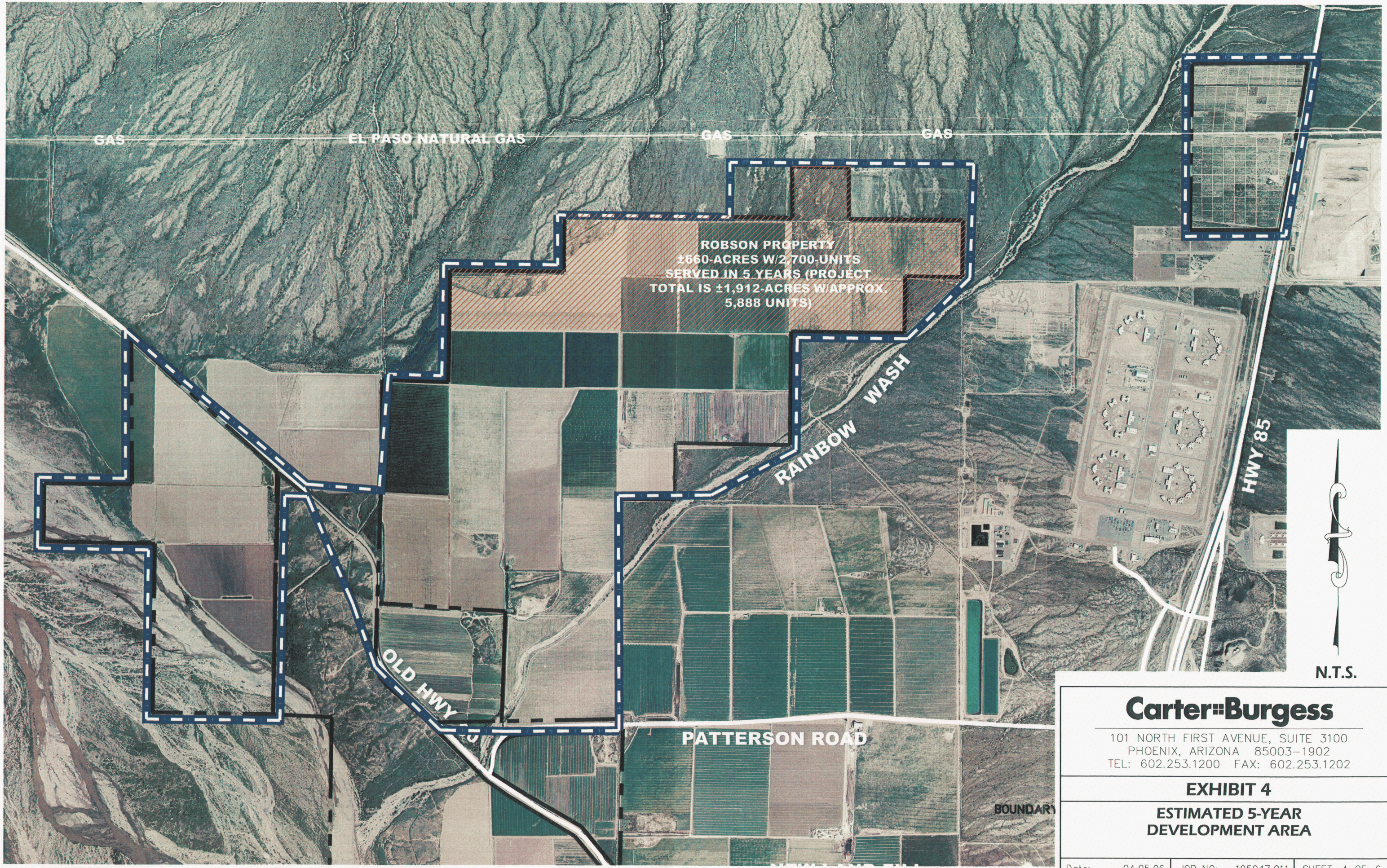
EXHIBIT 3

PRELIMINARY CONCEPTUAL WASTEWATER SCHEMATIC

Date:	JOB NO:	SHEET
04.05.06	195047.011	3 OF 6

EXHIBIT 4

ESTIMATED 5-YEAR DEVELOPMENT AREA



Carter::Burgess
101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 4

ESTIMATED 5-YEAR DEVELOPMENT AREA

Date: 04.05.06	JOB NO: 195047.011	SHEET 4 OF 6

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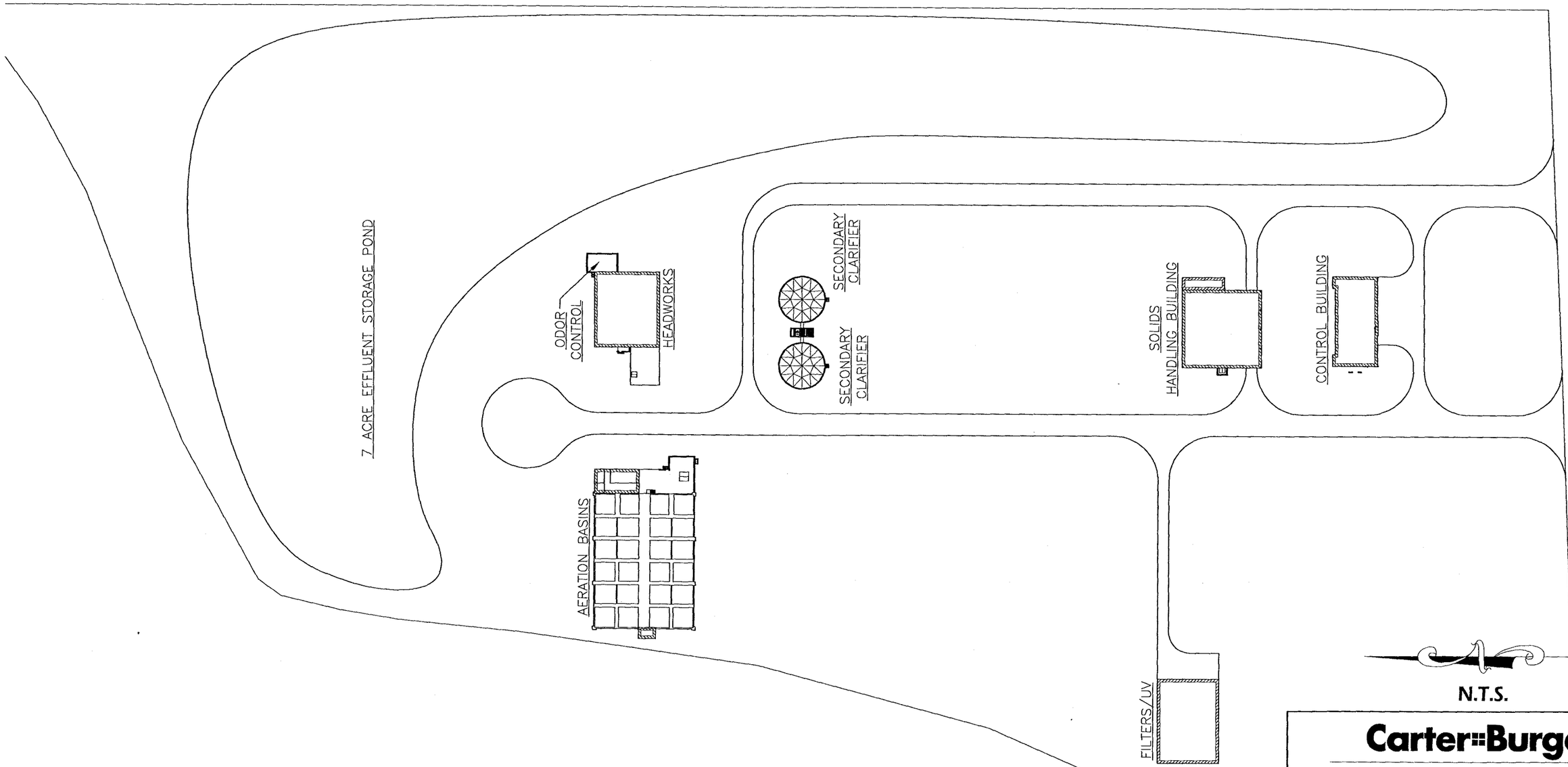
EXHIBIT 5

5-YEAR TREATMENT PLANT SCHEMATIC



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Carter::Burgess
101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

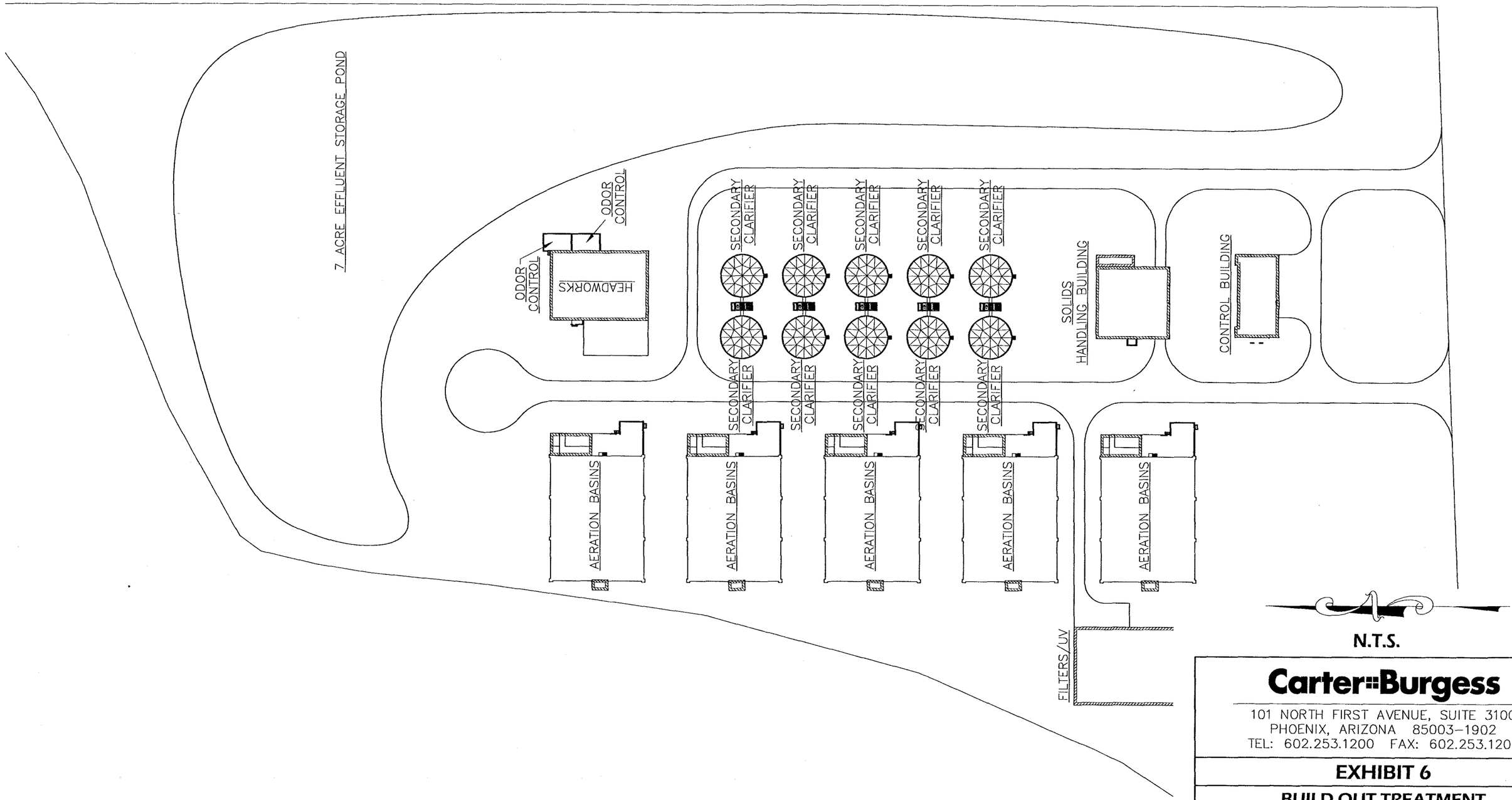
EXHIBIT 5

5-YEAR TREATMENT PLANT SCHEMATIC

Date: 04.05.06	JOB NO: 195047.011	SHEET 5 OF 6

EXHIBIT 6

BUILD OUT TREATMENT PLANT SCHEMATIC



N.T.S.

Carter::Burgess

101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 6

BUILD OUT TREATMENT PLANT SCHEMATIC

Date: 04.05.06	JOB NO: 195047.011	SHEET 6 OF 6

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APPENDIX I

Pipe Capacity Calculations

Upstream	Downstream	Area Number[5]	Area (acres)	Use	Density (units/acre)	Number of Units	Population (Person/Unit)	Area Population1	Cumulative Upstream Population	Wastewater Generation Rate[3,4]	Area Average Wastewater Flow (gpd)	Cumulative Average Flow	Peaking Factor	Cumulative Peak Flow (gpd)	Required Pipe Diameter (in.)
A1	A2	1	207	Commercial	N/A	N/A	N/A	3,519	3,519	1700	351,900	351,900	2.05	721,395	12
A2	A3	2	84	Residential	3.2	269	3.25	874	4,393	100	87,360	439,260	2.01	882,913	12
A3	A4	3	105	Residential	3.2	336	3.25	1,092	5,485	100	109,200	548,460	1.96	1,074,982	12
A4	A5	4	105	Residential	3.2	336	3.25	1,092	6,577	100	109,200	657,660	1.92	1,262,707	18
A5	A6	5	105	Residential	3.2	336	3.25	1,092	7,669	100	109,200	766,860	1.9	1,457,034	18
A6	A7	6	94	Residential	3.2	301	3.25	978	8,646	100	97,760	864,620	1.87	1,616,839	18
C1	A7	8	294	Residential	3.2	941	3.25	3,058	3,058	100	305,760	305,760	2.09	639,038	12
A7	A8								11,704	100	1,170,380	1,170,380	1.82	2,130,092	24
A8	A9	9	336	Residential	3.2	1075	3.25	3,494	15,198	100	349,440	1,519,820	1.78	2,705,280	24
A9	A10	10	346	Residential	3.2	1107	3.25	3,598	18,797	100	359,840	1,879,660	1.75	3,289,405	30
A10	A11	27	96	Residential	3.2	307	3.25	998	19,795	100	99,840	1,979,500	1.74	3,444,330	30
A11	A12	28	86	Residential	3.2	275	3.25	894	20,689	100	89,440	2,068,940	1.74	3,599,956	30
A12	A13	29	90	Residential	3.2	288	3.25	936	21,625	100	93,600	2,162,540	1.73	3,741,194	30
Force Main Discharge		19	524	Residential	3.2	1677	3.25	5,450	5,450	100	544,960	544,960	1.96	1,068,122	8[2]
F4	F5	14	257	Residential	3.2	822	3.25	2,673	8,122	100	267,280	812,240	1.89	1,535,134	18
F5	F6	15	178	Residential	3.2	570	3.25	1,851	9,974	100	185,120	997,360	1.85	1,845,116	24
F6	F7	16	155	Residential	3.2	496	3.25	1,612	11,586	100	161,200	1,158,560	1.83	2,120,165	24
F7	F8	17	136	Residential	3.2	435	3.25	1,414	13,000	100	141,440	1,300,000	1.81	2,353,000	24
F8	A13	18	102	Residential	3.2	326	3.25	1,061	14,061	100	106,080	1,406,080	1.8	2,530,944	24
Total			**3,300**			**9,897**		**35,686**			**3,568,620**		**1.67**	**5,959,595**	

1 = Commercial population equivalent found by dividing commercial wastewater flow by 100

2 = 8-inch force main results in velocity of 4.5 feet per second

3 = Commercial Generation Rate = 1,700 gal./acre

4 = Residential generation Rate = 100 gpcd

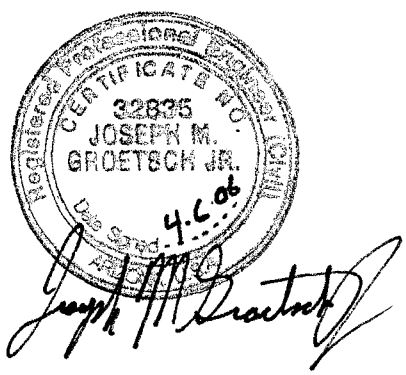
5 = Area 7 not used

GREEN ACRES WATER

CONCEPTUAL WATER SYSTEM STUDY

Prepared For:

Green Acres Water, L.L.C.
2151 East Broadway Road, Suite 210
Tempe, AZ 85282



Prepared By:

Carter Burgess
101 N. 1st Avenue, Suite 3100
Phoenix, AZ 85003
(602) 253-1200

Project Number: 195047.011

April 6, 2006

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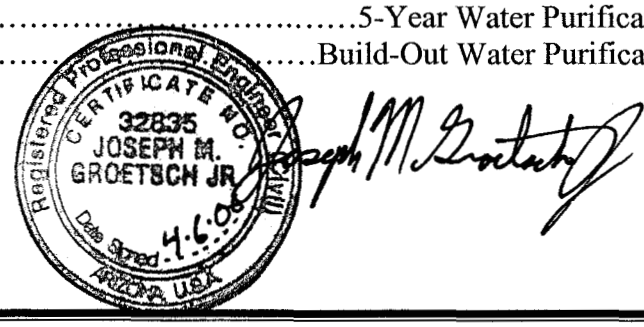


1.0 INTRODUCTION

1.1. General Background

The Green Acres Water Utility Franchise Area (GAWUFA) is located on approximately 3,300 acres in unincorporated Maricopa County. It is located between the Town of Buckeye and the Town of Gila Bend, along Highway 85. It is bounded by Highway 85 on the East, the Gila River on the west, and Patterson Road on the south, and the Buckeye Hills on the north. The land is mostly being used for agricultural, however part of the proposed franchise area is undisturbed desert. Refer to **Exhibit 1** - Vicinity Map, for the project location.

1.2. Scope of the Study

The purpose of this study is to develop a general water infrastructure concept for the GAWUFA. This study is not intended to be a detailed design report; rather, it is a general discussion of the improvements that will be required to provide service to the franchise area. The proposed infrastructure has been conceptually designed in accordance with Maricopa County Environmental Services Department (MCESD) and Arizona Administrative Code (ACC).

The study was conducted for the proposed water infrastructure system at the anticipated 5 year build out and at full build-out. While it is expected that the actual construction of the system will be phased, the water demands and conceptual design have been estimated for development of the system at the 5 year build out and at full build-out.

1.3. Topographic Conditions

The area encompassed by the GAWUFA generally slopes from northeast to southwest. Elevations range from approximately 900 feet at the

northeast corner to approximately 720 feet at the southwest corner. Slopes range from 1.5 percent in the areas at the base of the Buckeye Hills to 0.5 percent in the areas toward the southwest corner of the site. The Rainbow Wash crosses the proposed franchise area diagonally from northeast to southwest. The peak discharge in the wash is 11,568 cubic feet per second. (cfs) The elevation change over the franchise area will necessitate two pressure zones to maintain pressures in an acceptable range.

1.4. Existing Water Infrastructure

Currently there is no existing water infrastructure located in the Utility Franchise Area.

2.0 WATER DEMANDS

At the 5-year build-out we are estimating that the GAWUFA will serve approximately 5,000 single-family residential units. **Exhibit 2** – Franchise Area shows the anticipated location of development for the first 5 years.

2.1. Residential Development

At full built out based on an estimated density of 3.25 DU/ac it is anticipated that 10,725 residential units will be constructed. Residential demand criteria are in conformance with Arizona Department of Water Resources (ADWR) design requirements. The demand calculations are as follows:

$$\text{Average Day Demand (gpd)} = \left(\frac{\text{Average Population}}{\text{Unit}}\right) \times (\text{Average Water Demand per Unit})$$

$$\text{Maximum Day Demand (gpd)} = (\text{Average Day Demand}) \times (\text{Maximum Day Demand Peaking Factor})$$

$$\text{Peak Hour Demand (gpm)} = (\text{Average Day Demand}) \times (\text{Peak Hour Demand Peaking Factor})/1440$$

Table A, below, provides a summary of residential demand calculations utilized.

Table A – Residential Demand Criteria

Average Residential Demand (gpcd)	150
Average Population per Unit	3.25
Average Day Demand per Unit (gpd)	480
Maximum Day Demand Peaking Factor	2.0
Maximum Day Demand per Unit (gpd)	960
Peak Hour Demand Peaking Factor	3.0
Peak Hour Demand per Unit (gpd)	1,440
Residential Fire Flow (gpm)	1,500
Commercial Fire Flow (gpm)	3,000

3.0 SUPPLY, TREATMENT, STORAGE AND BOOSTER SYSTEMS

It is proposed that the GAWUFA will be supplied by groundwater wells. It is anticipated that each well will produce approximately 1,500 gpm. A series of wells will need to be able to provide the Maximum Day Demand at 18 hours per day with one well not in service (At a minimum 2 wells will be needed to start service within the GAWUFA).

3.1. Production Wells

The wells will discharge directly to the Water Purification Facility (WPF). Discharge from the wells will be conveyed to the WPF by means of a

transmission (fill) system independent of the water distribution system. A hydrogeologic study will be completed to determine water quantity and quality parameters. The required number of wells and well locations will be based upon the results of the study.

3.2. Treatment System

It is understood that some form of water treatment may be required in order to meet water quality standards. The extent of treatment necessary will be determined by analysis of the water produced by the wells as they are developed. The conceptual treatment option is a reverse osmosis (RO) system; the byproduct of which is brine. This brine will need to be disposed of in an acceptable manner. Any required treatment would be performed at the Water Production Facility (WPF); no well-head treatment is proposed.

3.3. Storage System

The sizing of the storage volume will be based upon meeting the greater of the following:

- Emergency reserve equal to the Average Day Demand
- Equalizing storage equal to 30% of Maximum Day Demand with Fire Flow Demand

The storage projected need for the 5 year build out is 2.4 MG. This will be satisfied by one (1), 2.5 MG above ground reservoir. The storage projection for full build out is estimated at approximately 5.2 MG. Reservoirs will be located at the water treatment facility (WTF). **Table B** presents the information used to calculate the required storage.

Table B – Required Storage

Build-Out Condition	Number of Units	Demand (gal/unit)	Total Avg. Daily Demand (gpd)	Max Daily (gpd)	Commercial Fire Flow (Gallons)	Fire Flow and 30% Nominal Day (gpd)	Required Storage Volume (gal.)
5-Year	5,000	480	2,400,000	4,800,000	3,000 for 3 Hours 540,000	1,980,000	2,400,000
Full Build Out	10,725	480	5,148,000	10,296,000	3,000 for 3 Hours 540,000	3,628,800	5,148,000

3.4. Booster Pumps and Hydropneumatic Tank

The sizing of the pumps will be based upon meeting the greater of the following:

- Peak Hour Demand
- Maximum Day Demand with Fire Flow.

Table C. – Required Pump Capacity

Build-Out Condition	Number of Units	Demand (gpd/unit)	Total Average Daily Demand (gpm)	Maximum Day Demand (gpm)	Peak Hour Demand (gpm)	Commercial Fire Flow (gpm)	Maximum Day plus Fire Flow (gpm)	Required Pumping Capacity (gpm)
5-Year	5,000	480	1,667	3,333	5,000	3000	6,333	6,333
Full Build Out	10,725	480	3,575	7,150	10,725	3000	10,150	10,725

As shown in **Table C** the controlling demand for the 5 year Build out is the Maximum Day plus fire flow. The Peak Hour Demand is con controlling demand for full build-out. The estimated total required pump

capacity for the franchise area at the 5-year Build-out is 6,333 gpm. The estimated total required pump capacity for the franchise area Build-out is 10,725 gpm. As there will be two pressure zones the required pumping capacity for each pressure zone will be calculated separately.

There will be two banks of pumps; one bank for each zone. These two pump series will be supplied from the same storage reservoir and will be linked after pressurization by a pressure reducing valve (PRV). Any fire flow demands in the system will be met by the higher pressure bank of pumps. Pump selection will allow demands to be met at all flow ranges with one pump out of service. The pump control system will allow sequential operation permitting uniform pump wear.

3.5. Pressure Zones

In the GAWUFA there will be two zones. Zone 2 will be located in the northeast half of the franchise area above an elevation of approximately 820-feet.Water will be supplied to this zone by pumps drawing from a storage reservoir located at the water treatment facility. Zone 1 will encompass the portion of the proposed franchise area below an elevation of 820-feet. Water will be supplied to Zone 1 by a separate set of booster pumps, which will also be located at the Water Treatment Facility.

4.0 PHASING

The WPF will be built in three (3) phases. The first phase will have the capacity to the first two years of development, projected to be 1,400 homes. The second phase will be brought on-line at the end of the second year and will have the capacity to support 3,200 homes; the projected 3.5 years of build out. The third phase will be brought on-line mid year of the fourth year and will have the capacity to support 5,000 homes; the projected 5 years of build out. Beyond the 5-year capacity improvements will be made to the Water Treatment Facility as needed. Sufficient

treatment capacity will be constructed and on-line prior to certificates of occupancy being granted for residences or commercial properties.

5.0 DISTRIBUTION SYSTEM

5.1. Proposed Distribution System

The GAWUFA will be served by a potable water distribution system, which will be totally separate from the raw water transmission system bringing water from the well sites to the Water Treatment Facility. PVC pipe, or ductile iron pipe may be used for pipe diameter smaller that 16-inches in diameter. Ductile iron pipe or concrete cylinder pipe will be used for all pipes 16-inches in diameter or larger. The proposed water company will construct the backbone water lines shown on **Exhibit 3**. For the purposes of this submittal the size of the proposed backbone lines has been estimated and shown on **Exhibit 3**. Prior to any construction a Master Plan containing a hydraulic model of the proposed distribution system will be submitted to the Maricopa County Environmental Services Department for approval. Other developers will be responsible for connecting to these main lines and installing local distribution lines to service the homes in their respective developments. Certificates of Occupancy will not be granted until adequate treatment plant capacity has been constructed and is on line.

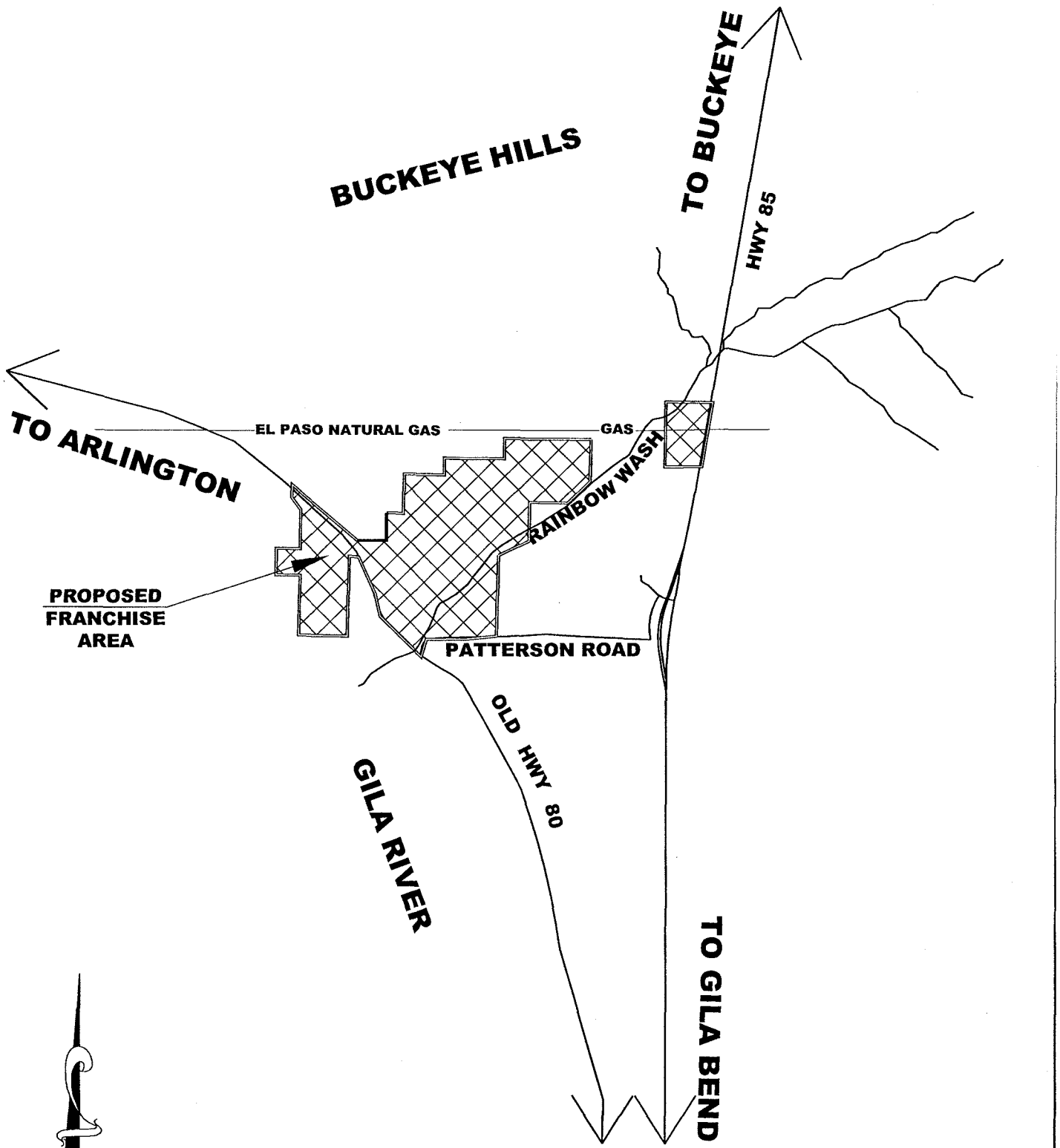
6.0 CONCLUSIONS

- A detailed Design Report will be required for the proposed WPF (including treatment, storage and booster systems) and for proposed well sites. The Report will address the phasing of the WPF. The Design Report will be submitted to MCESD for review and approval.
- Construction Plans will be prepared for proposed water infrastructure system components including distribution and transmission mains. The Construction Plans will be submitted to MCESD for review and approval.
- Detailed Subdivision Design Reports will be prepared for each residential development or for groups of concurrently developed parcels within the franchise area. The Reports will provide modeling of the water distribution system within each developed parcel and will be submitted to MCESD for review and approval.
- Subdivision water system Construction Plans will be prepared for each residential parcel or for groups of concurrently developed parcels and will be submitted to MCESD for review and approval.
- A hydrogeologic study will be completed to determine water quantity and quality parameters. The required number of wells and well locations will be based upon the results of the study.
- Prior to any construction a Master Plan containing a hydraulic model of the proposed distribution system will be submitted to the Maricopa County Environmental Services Department for approval.
- Certificates of Occupancy will not be granted until adequate treatment plant capacity has been constructed and is on line.
- Two pressure zones will be needed for the GAWUFA. The pressure zone boundary is currently anticipated to be located at an elevation of approximately 820–feet.

EXHIBITS

EXHIBIT 1

VICINITY MAP



N.T.S.

EXHIBIT 1
VICINITY MAP

JOB NUMBER
195047.011

SHEET 1 OF 5
DATE: 4.5.06

Carter::Burgess
101 N. FIRST AVE., #3100
PHOENIX, AZ 85003
TEL: 602.253.1200
FAX: 602.253.1202

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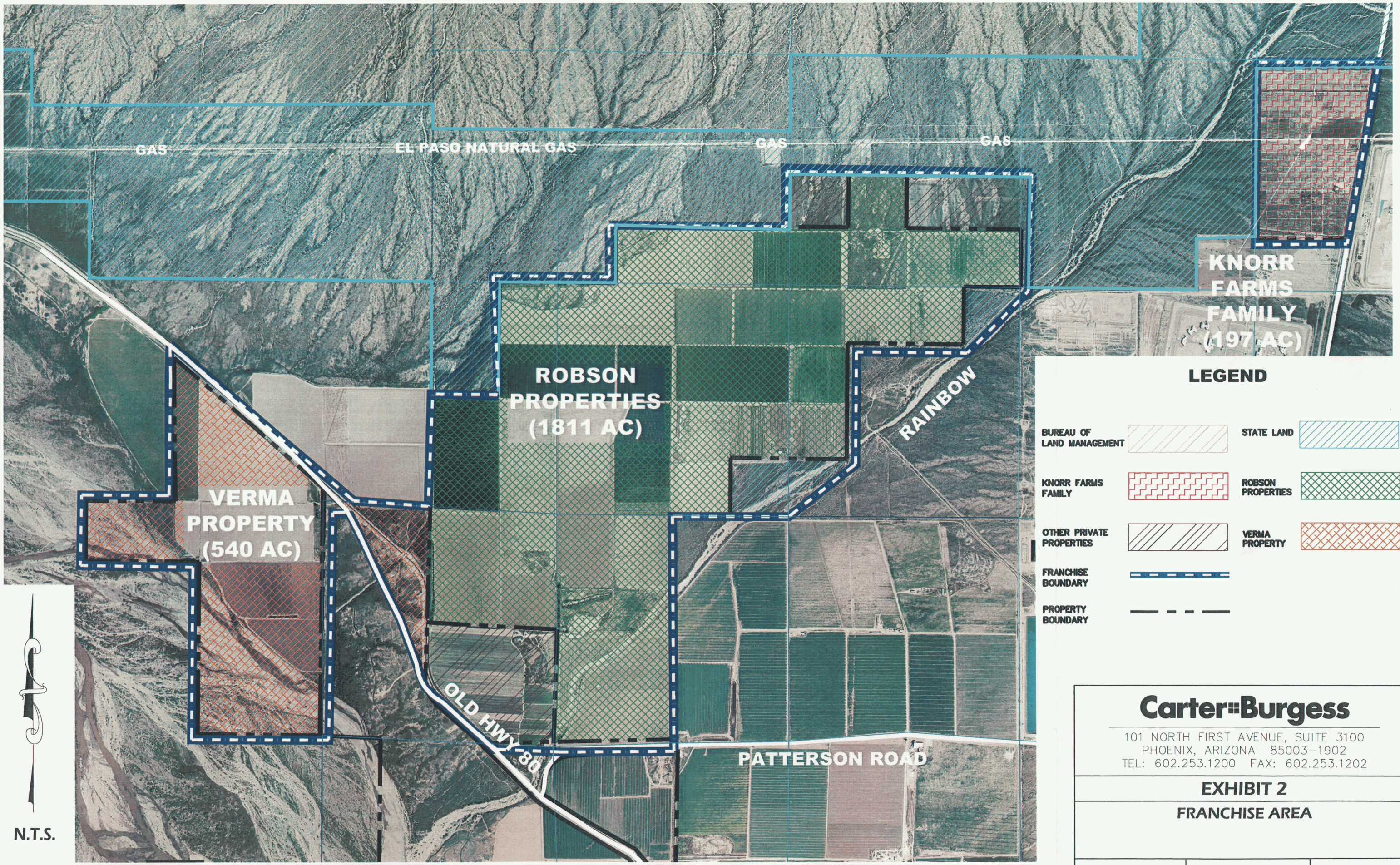
EXHIBIT 2

FRANCHISE AREA



LEGEND

- BUREAU OF LAND MANAGEMENT
- STATE LAND
- KNORR FARMS FAMILY
- ROBSON PROPERTIES
- OTHER PRIVATE PROPERTIES
- VERMA PROPERTY
- FRANCHISE BOUNDARY
- PROPERTY BOUNDARY

N.T.S.

Carter::Burgess
101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 2

FRANCHISE AREA

Date:	4.5.06	JOB NO:	195047	SHEET 2 OF 6

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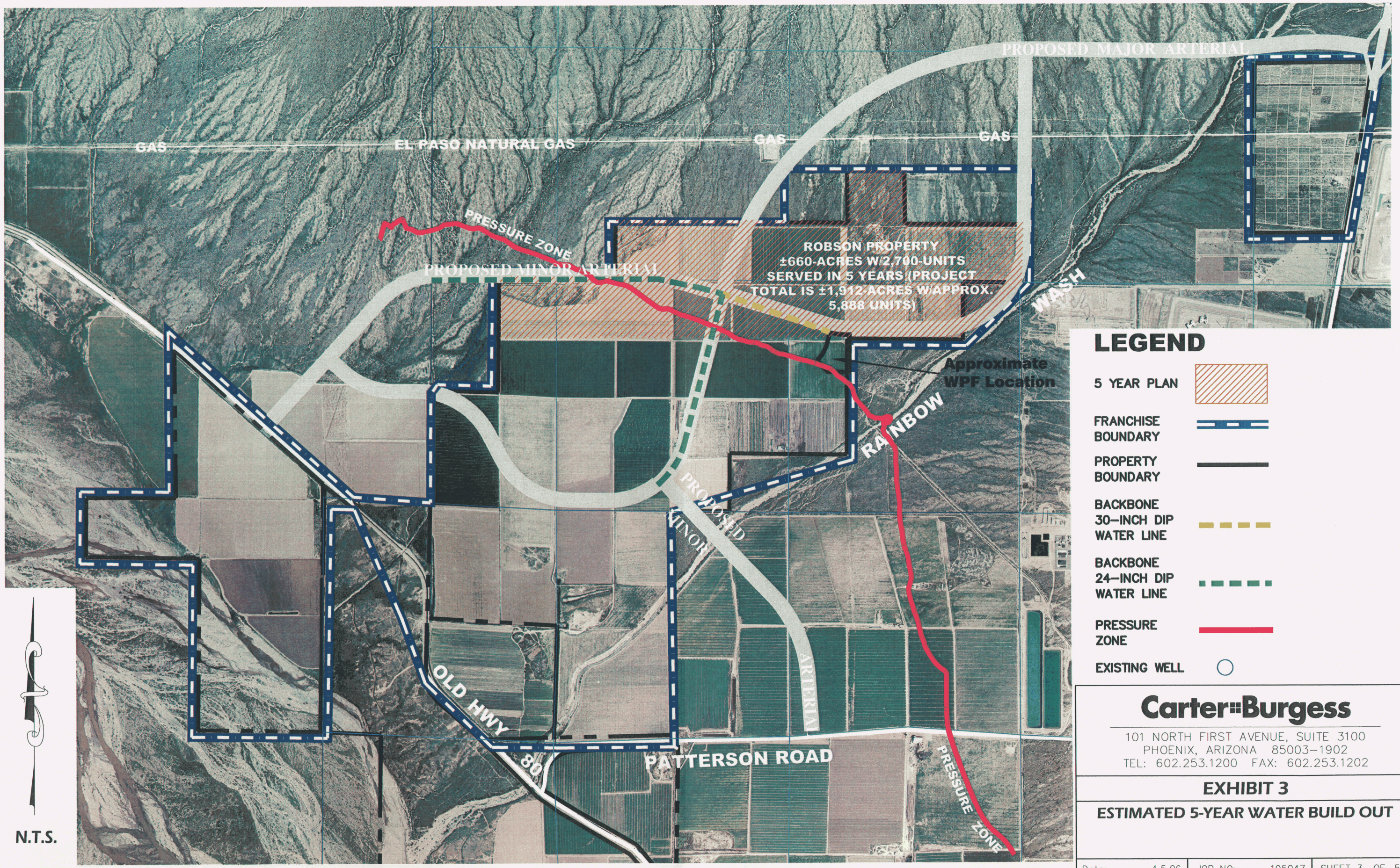
EXHIBIT 3

ESTIMATED 5-YEAR WATER BUILD OUT



LEGEND

- 5 YEAR PLAN
- FRANCHISE BOUNDARY
- PROPERTY BOUNDARY
- BACKBONE 30-INCH DIP WATER LINE
- BACKBONE 24-INCH DIP WATER LINE
- PRESSURE ZONE
- EXISTING WELL

Carter=Burgess

101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 3

ESTIMATED 5-YEAR WATER BUILD OUT

Date:	4.5.06	JOB NO:	195047	SHEET 3 OF 5

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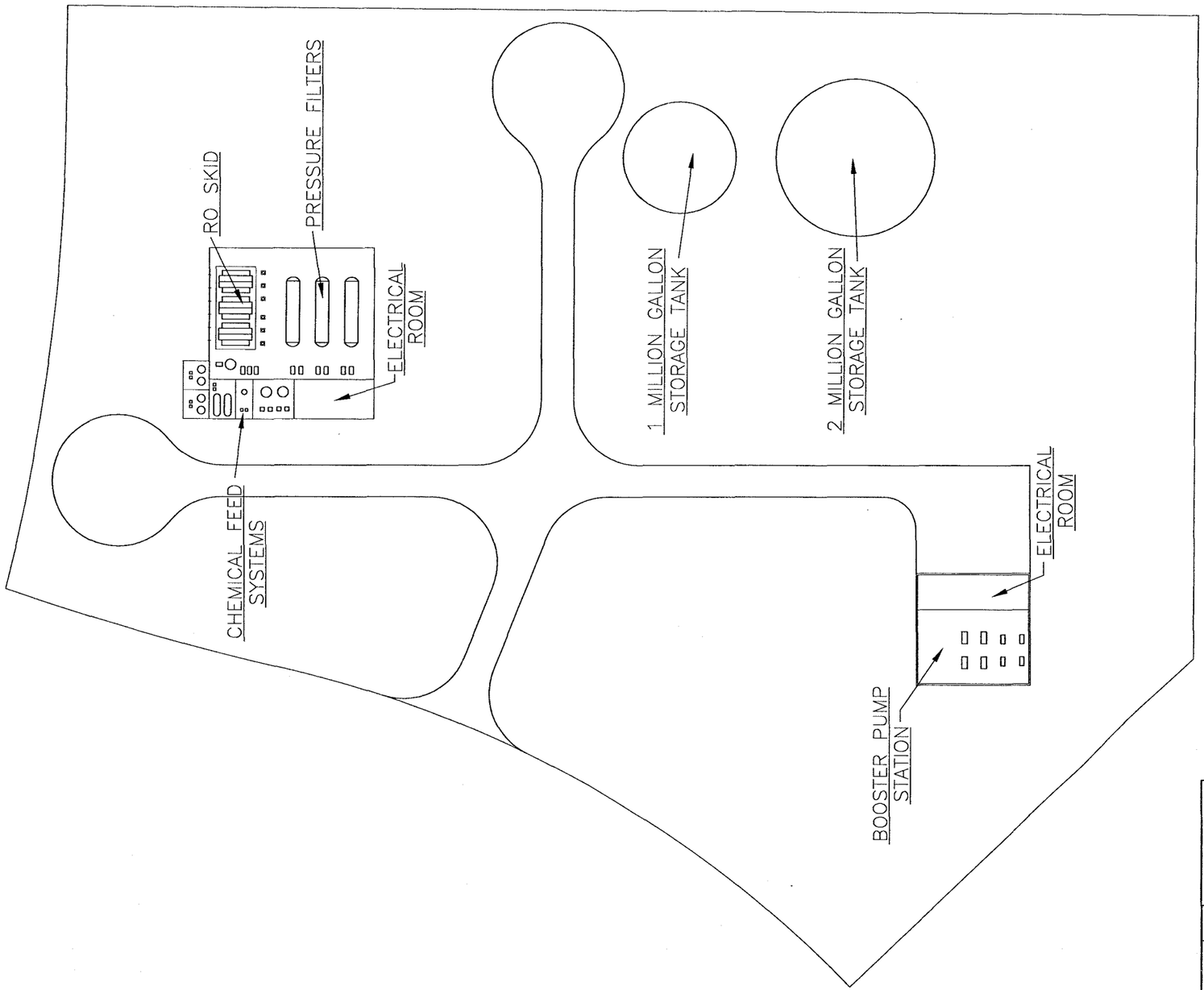
EXHIBIT 4

5-YEAR WATER PURIFICATION FACILITY



N.T.S.

Carter=Burgess
101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003–1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 4

5-YEAR WATER PURIFICATION FACILITY SCHEMATIC

Date: 04.05.06	JOB NO: 195047.011	SHEET 4 OF 5

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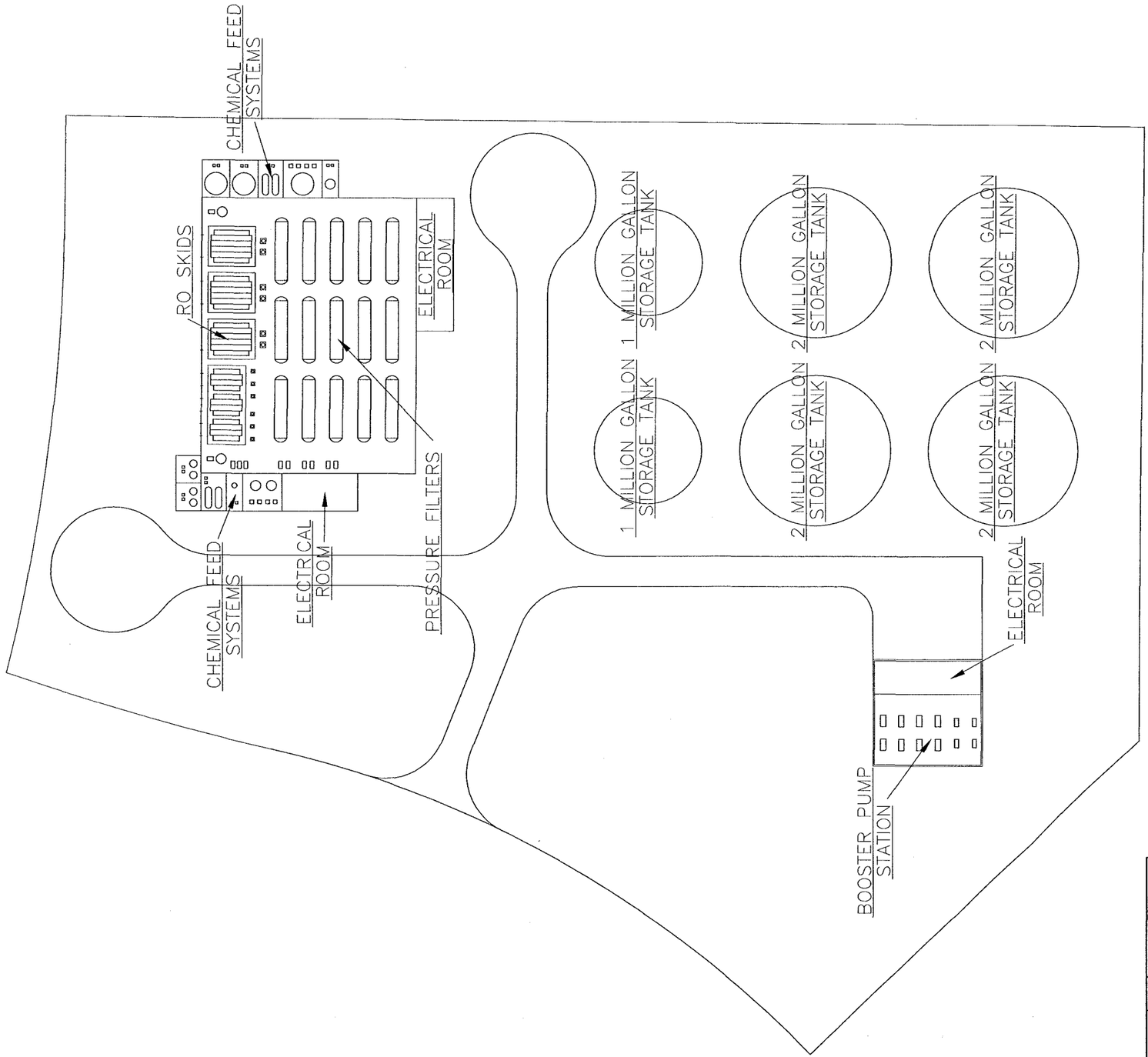
EXHIBIT 5

BUILD OUT WATER PURIFICATION FACILITY



N.T.S.

Carter::Burgess

101 NORTH FIRST AVENUE, SUITE 3100
PHOENIX, ARIZONA 85003-1902
TEL: 602.253.1200 FAX: 602.253.1202

EXHIBIT 5

BUILD OUT WATER PURIFICATION FACILITY SCHEMATIC

Date: 04.05.06	JOB NO: 195047.011	SHEET 5 OF 5

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